

**In the Claims**

The claims have been amended as follows:

1       1. (Currently Amended original) A photomask material comprising:  
2           a mask blank in the form of a transparent substrate;  
3           an opaque layer directly over and contacting the transparent substrate;  
4           a metal layer directly over and contacting the opaque layer;  
5           a resist layer directly over and contacting the metal layer having a thickness  
6       ranging from about 1000 Å to about 2000 Å to provide for improved achievable  
7       minimum resolution on the photomask.

1       2. (original) The photomask material of claim 1 wherein the transparent  
2       substrate is made of a material selected from the group consisting quartz, glass,  
3       silica glass, polysilicate glass, soda glass, and thin membrane materials made of  
4       silicon, SiN, SiC and diamond.

1       3. (Currently Amended original) The photomask material of claim 1-2 wherein  
2       the opaque layer comprises a chrome-based material selected from the group  
3       consisting of chrome and Cr:O:N.

1       4.    ~~(Currently Amended original)~~ The photomask material of claim 1-3 wherein  
2       the metal layer comprises a material selected from the group consisting of  
3       tungsten, tungsten-silicon, tantalum, and tantalum-silicon, ~~and~~ copper.

1       5.    ~~(Currently Amended original)~~ The photomask material of claim 4 wherein  
2       the metal layer has a thickness ranging from about 20 Å to about 600~~100~~ Å.

1       6.    ~~(Cancel.)~~

1       7.    ~~(Cancel.)~~

1       8.    ~~(Currently Amended original)~~ A photomask material comprising:  
2       a transparent glass substrate;  
3       a chrome-based layer directly over and contacting the transparent glass  
4       substrate;  
5       a copper ~~metal~~ layer comprising a material selected from the group consisting  
6       of ~~tungsten, tungsten-silicon, tantalum, tantalum-silicon, and copper~~ directly  
7       over and contacting the chrome-based layer; and  
8       a resist layer directly over and contacting the copper ~~metal~~ layer.

1 9. (original) The photomask material of claim 8 wherein the chrome-based  
2 layer comprises a material selected from the group consisting of chrome and  
3 Cr:O:N deposited to a thickness ranging from about 700 Å to about 1200 Å.

1 10. (Cancel.)

1 11. (Currently Amended original) The photomask material of claim 9 wherein  
2 the copper metal layer comprising a material selected from the group consisting of  
3 tungsten, tungsten silicon, tantalum, tantalum silicon, and copper and is deposited  
4 to a thickness ranging from about 100 Å to about 600 Å.

1 12. (Currently Amended original) The photomask material of claim 119  
2 wherein the resist layer has a thickness ranging from about 1000 Å to about 2000  
3 Å to provide for improved achievable minimum resolution on the photomask.

1 13. (Currently Amended original) A method of manufacturing a photomask  
2 comprising:  
3 providing a transparent substrate;  
4 depositing an opaque layer directly over and contacting the transparent  
5 substrate;  
6 depositing a metal layer directly over and contacting the opaque layer to a  
7 thickness ranging from about 20 Å to about 600 Å;

8 depositing~~coating~~ a resist layer over the metal layer having a thickness ranging  
9 from about 1000 Å to about 2000 Å;  
10 imaging the resist layer to form a resist mask pattern thereby exposing portions  
11 of the metal layer;  
12 etching the exposed portions of the metal layer using a first etchant that etches  
13 the metal layer faster than the underlying opaque layer to create a metal  
14 layer image; and  
15 transferring the metal layer image into underlying exposed portions of the  
16 opaque layer using a second etchant that etches the opaque layer faster  
17 than the metal layer to form a photomask in the opaque layer, whereby the  
18 thickness of the resist layer provides for improved achievable minimum  
19 resolution, image quality and critical dimension uniformity of the  
20 photomask.

1 14. (original) The method of claim 13 further comprising after transferring the  
2 metal layer image into the underlying opaque layer, removing any remaining metal  
3 layer.

1 15. (original) The method of claim 13 wherein the opaque layer comprises a  
2 chrome-based material selected from the group consisting of chrome and Cr:O:N  
3 deposited to a thickness ranging from about 700 Å to about 1200 Å.

1 16. (Currently Amended original) The method of claim 13 wherein the metal  
2 layer comprises a material selected from the group consisting of ~~tungsten~~,  
3 ~~tungsten silicon~~, tantalum, tantalum-silicon, and copper ~~deposited to a thickness~~  
4 ~~ranging from about 100Å to about 600Å~~.

1 17. (Cancel.)

1 18. (Cancel.)

1 19. (Cancel.)

1 20. (original) The method of claim 13 wherein the step of etching exposed  
2 portions of the metal layer to form the hard mask image comprises etching the  
3 metal layer using an etchant which is highly selective to the metal layer whereby  
4 the etchant removes only the metal layer and leaves the underlying opaque layer  
5 intact.

Please add new claims 21-24 as follows:

1 21. (New.) The photomask material of claim 5 further including an adhesion  
2 promoting layer between the metal layer and the resist layer.

1       22. (New.) The photomask material of claim 21 wherein the adhesion  
2       promoting layer comprises Hexa-methyl-disilizane.

1       23. (New.) The photomask material of claim 8 further including an adhesion  
2       promoting layer between the metal layer and the resist layer.

1       24. (New.) The method of claim 13 further including depositing an adhesion  
2       promoting layer between the metal layer and the resist layer.